State of Utah
Department of Administrative Services
Division of Purchasing and General Services

Michael O. Leavitt
Governor
S. Camille Anthony
Executive Director
Douglas G. Richins
Division Director

3150 State Office Building - Capitol Hill - Salt Lake City, Utah 84114
Phone: (801) 538-3026 - Fax: (801) 538-3882 - www.purchasing.utah.gov

October 7, 2003

*** ADDENDUM *** ADDENDUM *** ADDENDUM ***

SOLICITATION: **JG4024**
DUE DATE: **10/28/03**
TIME: **2:00PM**
DESCRIPTION: **ONE (1) SELF PROPELLED, ALL-WHEEL DRIVE, ROTARY SNOW BLOWER**

ADDENDUM #4

The following are to be added or changed to the specifications for this BID:

1. The attached specifications will replace all previously issued specifications and addenda.
2. The new bid due date is 10/28/03 @ 2:00pm.
3. With procurement process questions contact Jared Gardner (801) 538-3342.

**********END OF ADDENDUM**********

To acknowledge receipt of addendum, include a copy of this addendum with BID submittal or give written acknowledgement with the BID. It shall be the responsibility of the bidder to appropriately disseminate this information to all concerned prior to the assigned bid time.

_____ _____ _____
Company Name Signature Date

STATE OF UTAH

Utah Department of Transportation
Equipment Operations

ONE – SELF-PROPELLED, ALL-WHEEL DRIVE, ROTARY SNOW BLOWER

REVISED: September 2003
Commodity Code: 76557

State Purchasing Agent: Jared Gardner
3150 State Office Building, Capital Hill
Salt Lake City, UT 84114-1061
Phone Number: (801) 538-3342
Fax Number: (801) 538-3880
E-Mail: jaredgardner@utah.gov

UDOT, Purchasing Agent: Paul Rottmann
4501 South 2700 West
Salt Lake City, UT 84114-8260
Phone Number: (801) 965-4078
Fax Number: (801) 965-4073
E-Mail : prottmann@utah.gov

Note: All questions or inquiries pertaining to this ITB shall be submitted in writing and directed, via fax, to Paul Rottmann, UDOT Purchasing Agent.

Invitation To Bid (ITB)
Bids are requested to establish a firm-fixed price for one (1), new, self-propelled, rotary snow blower. The unit shall have an All-Wheel drive, four-wheel steering chassis. Snow removal capacity with performance to remain constant on grades up to 8%. It is for use in highway maintenance snow removal operations.

PUBLICATION

PART I: GENERAL CLAUSES AND CONDITIONS

1. The equipment furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, and shall be of quality workmanship and material. The bidder represents that all equipment offered under this specification shall be new including all components. USED, SHOPWORN, DEMONSTRATOR, PROTOTYPE, SURPLUS OR DISCONTINUED MODELS ARE NOT ACCEPTABLE.

2. **Bidder shall submit the latest detailed specifications, in duplicate, for the equipment the bidder proposes to furnish.** Failure to provide and comply with submitted specifications will result in bid being declare non-responsive. **(See: Example of Detail Specification)**

3. The unit shall be completely assembled and adjusted, and all equipment including standard and supplemental equipment shall be installed and the unit shall be ready for continuous operation upon delivery. All parts not specifically mentioned which are necessary for the unit to be complete and ready for operation or which are normally furnished as the vendor shall furnish standard equipment. All parts shall conform in strength, quality and workmanship to the accepted standards of the industry including paint. The unit provided shall meet or exceed all Federal and State of Utah safety, health, lighting and noise regulations and standards in effect and applicable to equipment furnished at the time of manufacture.

4. It is the intent of State of Utah to purchase goods, equipment and services having the least adverse environmental impact, within the constraints of statutory purchasing requirements, State of Utah need, availability, and sound economical considerations. Suggested changes and environmental enhancements for possible inclusion in future revisions of this specification are encouraged.

5. We encourage manufacturers to adopt the International Organization for Standardization (ISO) 9001-9003 standards, technically equivalent to the American National Standards Institute/American Society for Quality Control (ANSI/ASQC Q91-93 1987), and obtain certification. Adopting and implementing these standards is considered beneficial to the manufacturer, the State of Utah, and the environment. It is the State of Utah's position that the total quality management concepts contained within these standards can result in reduced production costs, higher quality products, and more efficient use of energy and natural resources.

   Manufacturers should note that a 5% preference will be given for compliance to ISO certification. (For example if bidder A who is ISO certified and meets all other bid requirements were to bid $104,000 and bidder B who is not ISO certified and meets all other bid requirements were to bid $100,000 then bidder A would be awarded the contract.)

6. Wherever in this document an item is defined by using a trade name or name and number of a manufacture or vendor, it is intended that the words, "or approved equal" apply. A reference, in these specifications to a particular product is made only for purpose of clarification of the minimum acceptable standards. "Or approved equal" means any other brand that is equal in use, quality, economy and performance to the brand listed.

7. This Specification is the minimum acceptable standard unless noted otherwise in this ITB.

8. Measurements will be given in the English system.

PART II: GENERAL SPECIFICATIONS

1. This unit shall be designed for one-man operation, and have a fully enclosed, thermally and acoustically insulated cab.

2. Unit to be designed to start and operate at altitudes of up to 10,000 feet and in ambient temperatures of minus 40^0 degrees Fahrenheit, with full protection for all systems.

3. Unit to be capable of maintaining a minimum road speed of 35 mph without overheating of any components.

4. Unit to have minimum GVW rating 31,000 lb.

5. All critical fasteners (bolts, nuts, washers, etc.) shall be of SAE Grade 8 or better quality, only minor brackets and minor sheet metal components shall use SAE Grad 5 fasteners. All Fasteners shall be USA made, shall be torqued to industry standards, and/or locking devices shall be utilized to prevent equipment from working loose when the unit is in service.

6. All tubing, lines and electrical wiring shall be positioned in a protective coating or loom arrangement in order to avoid damage due to rubbing or chaffing.

7. Engine to mounted to rear of chassis.

8. All components and /or attachments must be warranted and certified by their manufacture(s) for use in this particular application.

9. Liquidated damages for Late delivery: bidder is expected to deliver goods that conform in all material aspects to the contract specifications on or before the date provided therein, as may be amended by written agreement of the parties.

   9.1 In the event that the goods are delivered late or in the event that the goods do not conform in all material aspects to the contract specifications, the State shall be entitled to offset against the Contract price, as liquidated damages and not as a penalty, and amount equal to $85.00 per day of the total price of the non-conforming goods multiplied by the number of days elapsing between the delivery date provided into the specifications and the date that conforming good are delivered the State. The number of days for which liquidated damages shall apply shall include, in the case of non-conforming goods, the time reasonably necessary for the State to inspect the goods.

   9.2 These liquidated damage represent a reasonable estimate of amounts necessary to compensate the State for loss of use of the goods during the period in which the goods have been timely delivered.

PART III: DETAIL SPECIFICATIONS

1. Chassis shall be designed to permit easy and safe mounting and dismounting of the unit. Grab bars shall be installed as required for safe mounting and dismounting by personnel.

   1.1 All steps or walkways shall be raised lug or expanded metal type construction. All sheet metal, cowling, steps and fenders shall be free of sharp edges and protrusions, include ample supports and bracing to prevent distortion and cracking.

   1.2 Unit axles shall have GVW rating exceeding expected weights of the unit plus related equipment.

2. Frame shall be of heated treated, 70,000 p.s.i. yield strength, single channel, carbon manganese steel rails, with grade 8 bolted construction. Frame rails shall be connected by an adequate number of cross members to resist frame distortion from the lateral stresses expected in this application.

   2.1 Frameless integral body, liners, wrappers, fishplating, and bolt-on extensions are not acceptable.

   2.2 All frames and stiffeners shall be treated with a corrosion inhibitor, and shall be primed and painted before assembly.

   2.3 Pintle hook hitch shall be provided and be securely attached to the rear mainframe rails. It shall be capable of handing expected loads when vehicle needs to towed or pulled rearward.

3. Ground Clearance shall not be less than 8" with blower head raised.

4. Height of this unit shall not exceed 13 feet including chutes, lights, and exhaust stacks.

5. Width of this carrier vehicle with blower head installed shall not exceed 110 inches.

6. Engine shall be a liquid cooled, turbo charged, diesel, 4 – cycle, with cylinder liners.

The engine shall meet or exceed the following:

6.1 500 horsepower
6.2 12 liter displacement
6.3 Electronic fuel injector
6.4 Replaceable spin on – oil, fuel, and coolant filter
6.5 Dry type air cleaner with dash mounted restriction indicator gauge
6.6 On board diagnostic capability
6.7 Shall have cold start capability including block heat(s).
6.8 Engine shall have enclosed housing, weatherproof, with opening for access to each side.
6.9 Engine protection system which monitors and/or shuts engine down for the following: Low oil pressure, high oil temperature, coolant temperature, and engine temperature.
6.10 Engine shall meet emission standards applicable at time of delivery.

7. Cooling system shall be conditioned with coolant inhibitor and additives approved by engine manufacturer capable of minus -40^0 degrees. Coolant radiator shall be securely mounted, capable of rough service application, with easily accessible petcock drains at all points necessary.

7.1 The radiator shall be capable of maintaining the correct operation temperature under all conditions encountered without dependence on other systems to provide cooling. If cooling system incorporates the use of shutters of other method of diverting air to either the radiator or engine air intake, these systems shall operate consistent with the engine manufacturer's recommendations.

7.2 Hose Clamps: Utilized on engine coolant line one (1) inch inside diameter or larger are to be "Constant Torque" design, stainless steel.

8. Engine Air Intake System: Must have two (2) stage (dual element) air cleaner and an air filter restriction indicator, dash-mounted .

9. Fuel tank shall have the capacity to sufficiently operate unit and engine for a period of eight (8) hours at full-expected loads with an ample reserve.

9.1 The fuel tank must be removable, with a gauge-sending unit.

9.2 When more than one (1) tank is furnished, means shall be provided to assure equalized fuel level in all tanks.

10. Drive Train – Carrier: To be a two (2) axle, single tire, 4X4.

11. The drive system shall be a hydrostatic type matched to the operating characteristics of the carrier engine. The drive train configuration will also provide for adequate travel speeds.

11.1 The drive train system shall have the capability of manual control in conjunction with automatic hydrostatic drive to keep the machine at a constant speed and the engine at it's maximum torque while in full operation.

11.2 This system shall be a dual mode system automatic and operator controlled. It shall allow the operator activated a load sense while "blowing" snow and allow the operator to "travel" using the accelerator.

11.3 The load sensing shall be actuated by engine RPM to keep the snow blower head form being overloaded.

11.4 Carrier Transmission shall be infinitely variable hydrostatic drive and be geared to allow the snow blower to travel from 0 to 35 MPH.

12. Hydraulic pump shall be Sundstrand, Sauer-Danfoss or Rexroth or pre-approved equal. warranted and certified by manufacture for application. (Belt driven is not acceptable.)

13. Main drive motor shall be Sundstrand or pre-approved equal, direct coupled to motor with transfer case.

14. Transfer case shall be all wheel drive with two (2) speeds and shall provide positive mechanical drive to both front and rear axles with rear axle lockout. The gearbox manufacturer must certify the transfer case for use in this application.

14.1 Drive Axles, front and rear shall be certified by the manufacturer for use in this application.

14.2 Axles shall be designed to meet or exceed the expected GVW of this vehicle fully loaded with all accessories. A 25,000 lbs front and 18,000 lbs rear minimum rating is required

15. Drive Shaft and universal joints shall be greasable and rated in excess of expected loads.

16. Brakes system must meet FMVSS standards and shall be of the full hydraulic boosted type. A Parking brake system shall be provided with a warning light when set.

17. Steering shall utilize its own pump and be driven off the drive engine. Steering shall be positive and sensitive even at low RPM.

17.1 Steering: To be full power or hydraulic power assist.

17.2 To be capable of easily maintaining directional control during operation.

17.3 Components to be installed to protect against damage.

17.4 All-Wheel steering, controlled through the cab steering wheel or joystick is required including:

17.4.1 Front wheel steer, conventionally steered vehicle with axle in locked position and rear axle does not steer.

17.4.2 Coordinated Steer, front axle is steered, the rear axle turns in opposite direction of the front, for enhanced maneuverability.

17.4.3 Crab steer, vehicle travel in a diagonal motion.

17.5 Crab and coordinate steering.

17.6 An indicator showing the rear wheel position shall be in easy view of the operator.

17.7 Safety lockout shall automatically limit the unit speed if the steering mode is not in front wheel steer.

17.8 Mechanical or hydraulic locking system shall immobilize rear axle in the event of failure or deactivation.

18. Suspension shall meet or exceed the GVW rating with all accessories fully loaded. Overload – type, helper spring(s) are not acceptable.

19. Wheels/Tires shall be the same size and interchangeable front and rear, and shall meet or exceed the GVW rating with all accessories.

19.1 Tire design shall be radial with an aggressive mud and snow tread, readily available thru USA distributors.

19.2 A Spare wheel and tire must be furnished.

20. Hydraulic System shall operate in an extreme cold weather environment and meet or exceed ratings and capacity needed.

20.1 Hydraulic reservoir shall be designed to include site gauge above pump level.

20.2 Hydraulic filter to be spin on type, with properly rated valves installed to isolate filter(s) for servicing and compliance.

21. Electrical system shall be twelve (12) volt, negative ground system.

21.1 Circuit panel shall be located in cab interior and very easily accessible, including auto-resetting circuit breakers permanently labeled.

21.2 Four (4) maintenance free, group 31, batteries, with 3,000 CCA, shall be mounted for easy accessibility.

21.3 To have single high ampere master electric switch to cut off power source from battery to the ground (positive side if not on ground side.)

21.4 Alternator(s) to be minimum 200 amps, waterproof, and exceed the all amp-rating requirements including all accessories at peak load.

21.5 Any inverters used for power (example heated windshield and two way radios) are to provide an output wave form that has a pure sine wave and also be UL approved.

21.6 Backup Alarm to be electronic, self-adjusting sound level, located on rear.

21.7 Light bar and accessories shall be wired through a 12-volt DC constant duty solenoid and controlled by mounted bus bar. The solenoid shall be wired to the key switch.

22. Lighting must be rubber grommeted, and have impact resistant, reflective and recessed lenses. Light must meet all applicable Federal Motor Vehicle Safety Standard (FMVSS).

22.1 Two (2), six (6) inch x three (3) inch minimum, 50 watt HID adjustable mounted left and right, front upper outside cab.

22.2 Two (2), six (6) inch x three (3) inch minimum, 50 watt halogen flood, adjustable mounted left and right, rear upper outside cab.

22.3 Light bar to be Federal –Target Tech with four (4) rotary minimum or approved equal.

22.4 Stop, turn, tail and marker lights must be LED.

23. Wiring must have a sealed wire harness, secured to prevent chafing, color-coded or continuously numbered, and be weather-tight. All connections shall be in weather-tight box(es).

24. Cab fully enclosed shall included the following:

24.1 Insulated
24.2 Weather sealed
24.3 Sound suppressed to 85 db maximum.
24.4 Roof gutters over doors and windows
24.5 2 hinged, locking, doors with latches
24.6 Dual sun visors
24.7 Certified automotive tinted safety glass
24.8 Windshield to be one piece and heated, with a sun visor included for driver.
24.9 Door windows shall be of roll/down type
24.10 Wiper shall be heavy duty multiple speed with washer system.
24.11 Cab interior dome light.
24.12 Rubber matting on floor to be slip resistant.
24.13 Driver seat to be medium or high back, premium- cloth, 6-way adjustable, air ride or hydraulically dampened.
24.14 Passenger seat to be manufacture's standard.
24.15 Seat belts to be three (3) point type.
24.16 Mirrors – exterior to be heated including stainless steel brackets, upper standard lens and lower convex lens and fully adjustable.
24.17 Steering wheel to be tilt and telescoping type.
24.18 Horn with decibel rating of approximately 130 and include snow shield.
24.19 Gauges, indictors and controls mounted in the cab are to be within easy view of operator.
24.19.1 Gauges included to be Hobbs type hour meter, audible and visual warning system for engine oil pressure, engine coolant temperature, voltmeter, air pressure, fuel, tachometer, speedometer, transmission temperature, hydrostatic fluid and parking.
24.19.2 All gauges to be lighted from behind.

25. Heater/Defroster system shall include a two speed motor, and not less than 41,000 BTU capacity, with ducts to the floor and defroster – windshield and side fronts. It shall be capable of

maintaining a 50-degree F inside temperature when the outside, ambient temperature is -40-degrees F.

26. Rotary blower shall be two (2) stage design, and shall be considered and integral part of the unit.

27. Blower head shall be able to hydraulically tilt right and left nine (9) degrees each way to follow the irregularities of ground surfaces. It shall have the ability to hydraulically tilt forward five (5) degrees for the purpose of peeling hard pack snow from the pavement.

    27.1 Blower shall not depend on forward motion to pick up and cast snow.
    27.2 Blower cutting width shall be a minimum of 102" wide.
    27.3 Blower shall be capable of raising, hydraulically, 18" off the ground level.
    27.4 Blower head shall be capable of no less than 2" of downward pressure.
    27.5 Blower head shall have float capability allowing head to follow contour of ground.
    27.6 Blower head shall have a mechanical lock to secure head in the up position for travel.
    27.7 Belt drives are not acceptable.

28. Helical Reel assembly shall have the following:

    28.1 First stage ribbon shall be driven from the center or from both right and left sides and be protected by hydrostatic reliefs or shear pins and have full torque reverse capabilities.
    28.2 Open center type with two (2) – section, bolt-on, replaceable, helical cutters.
    28.3 Cutter ribbons shall be beveled and have a serrated cutting edge.
    28.4 Outer safety rings shall be bolted on each outboard side of cutter drums.
    28.5 Reel shall be a minimum of 49" in diameter, and minimum 101"cutting width.
    28.6 Auger or reel shall be shear pin protected, and pins shall be easily accessible, and easily replaceable using common hand tools.

29. Helical Reel Housing shall be constructed of steel and will follow the contour of helical reel and impeller assembly.

30. Impeller shall be sized to ensure proper snow flow and to accept all the snow the reel can supply at full load, full speed conditions.

    30.1 The impeller blades shall be replaceable, bolted on, and contain on less than five (5) blades.
    30.2 Shear pins to be located at the furthest point from drive mechanism to minimize damage to drive train components. The shear pins shall also incorporate replaceable shear pin bushings. Hydrostatically driven components shall be protected by proper hydraulic relief circuits.
    30.3 Impeller housing shall be designed and built with a minimum of 10-gauge steel. Housing shall have bolt-in, replaceable steel liner insert made of a minimum 12 gauge, AR-360.
    30.4 Impeller housing shall be hydraulically controlled to rotate to cast snow 85 degrees right, 45 degrees left, and flat cast to the right.

31. Reel / Impeller blower drive assembly shall be certified for this application by the manufacture through Allison transmission (preferred) with a minimum of four (4) speeds and be capable of shifting without disengaging rotary drive and blowing snow.

    31.1 Blower shall be capable of reverse motion to disgorge snow and ice.

31.2 Impeller shall have shear pin protection and be replaceable.

32. Scraper Blade shall be replaceable high carbon steel, cutting edge, fitted to the lower leading edge of blower housing.

33. Snow Cast Assembly shall be capable of precision casting and placement of snow.

33.1 Impeller housing / casting chute shall be designed to rotate around impeller and to left and right. It must be sized to handle the maximum output of the assembly under all snow conditions.

33.2 Casting assembly shall be fully controllable by the single operator in the cab, with maximum visibility.

34. The unit shall be painted with lead free paint meeting vehicle manufacture standards. Do not paint glass, rubber and those metallic accessories or fixtures constructed of rust-resistant or plated material not normally painted. Powered coating paint process is optional, and the preferred method for corrosion protection from salt and chemicals.

35. Complete set of filters to be delivered with unit.

36. All publications are to be provided by the successful bidder, at delivery, including: Manuals in paper must be provided, and CD's if available, including, service manuals – body, chassis and electrical, engine, transmission, differential(s) (service and rebuild), electrical and vacuum troubleshooting, wiring diagrams, service specifications, including inspection intervals and lube charts, engine/emission diagnosis and operator manuals

PART IV: DELIVERY, ACCEPTANCE AND PAYMENT

1. DELIVERY REQUIREMENTS: Delivery of all equipment on this order shall be completed within the number of days bid and before May 1, 2004 as shown on the purchase order. Any unit(s) not delivered within this time frame may be canceled from the purchase order or, at State of Utah's option, an extension may be granted, whichever is in State of Utah's best interest. If any unit is canceled for non-delivery, the needed equipment may be purchased elsewhere and the vendor may be charged any additional increase in cost and handling.

2. ACCEPTANCE INSPECTION: All equipment ordered with this request will be subject to acceptance inspection and performance testing upon receipt. Acceptance inspection and performance testing will not take more than five working days, weather permitting. The supplier will be notified within this time frame of any units not delivered in full compliance with the purchase order specifications. If any units are canceled for non-acceptance, the needed equipment may be purchased elsewhere and the vendor may be charged any additional increase in cost and handling.

2.1 A pilot mode review will be required at the manufacturer's factory for acceptance of unit. Expenses for two UDOT representatives for the pilot review shall be included in the bid.

3. TRAINING: The supplier shall provide one full day (8 Hours) minimum of training factory certified instructor(s) at a UDOT facility.

3.1 To include: Agenda to be supplied with successful bidder.

3.1.1 Operating procedures per operating manual.
3.1.2 Break-in procedures
3.1.3 Equipment limitations.
3.1.4 Operator maintenance.
3.1.5 Before operations checks and lubrication.
3.1.6 Safety.
3.1.7 Cold weather operations
3.1.8 Jump-starting.
3.1.9 Welding on equipment.
3.1.10 Towing or transporting equipment.
3.1.11 Instruments and controls.
3.1.12 Gauge interpretation.
3.1.13 Equipment operation, Do's and Don't
3.1.14 Attachment operation, Do's and Don't

3.2 To include a six (6) hours minimum of mechanics' (Journeyman level) training including the following theory, trouble shooting, and test procedures for the following;
3.2.1 To include: (Agenda to be supplied with successful bidder.)
3.2.2 Electronics.
3.2.3 Electrical.
3.2.4 Hydraulics.
3.2.5 Air system.
3.2.6 Drive Train.
3.2.7 Engine and transmission electronics.

4. PAYMENT: Payment will be made after the acceptance inspection has been completed and State of Utah determines that the equipment delivered meets specifications, on-site training is completed, recite of all documents, invoices, manufacture statement of origin and manuals have been received. The State may correct invoices to coincide with the bid documents and the Purchase documents. Payment will be sent via mail. WORKING DAY: A working day is defined as a calendar day, not including Saturdays, Sundays, or regularly observed state and federal holidays.

PART V: WARRANTY

1. Equipment shall be warranted against all defects in material and workmanship for a period of not less than one (1) year, and shall cover 100 percent parts and labor for the unit, and five (5) years on the engine. If manufacturer's standard warranty period exceeds one (1) year then the standard warranty period shall be in effect. The warranty shall begin on the date the unit is determined to meet specifications and is accepted into State of Utah's fleet.

2. INTENT: During the warranty period the vendor will be responsible for labor, materials, and other costs as outlined below associated with required warranty repair. It is the intent of this warranty that the Supplier performs warranty repair work. At State's option, STATE may perform minor warranty repairs to the unit at the vendor's expense.

3. MINOR WARRANTY REPAIRS: It is the intent of this warranty that the vendor performs minor warranty repairs; however, at STATE'S option, warranty repairs deemed by STATE to be minor

in nature may be performed by STATE at the vendor's expense. Parts required for repairs, which are to be made by STATE, will be OEM parts and obtained from the vendor at no cost to STATE, or from any commercial source with reimbursement to STATE.

4. Labor: Labor for warranty repairs will be calculated at the composite rate for the mechanic in effect at the time of the warranty repairs. Labor rate will not exceed $50.00 per hour. The time allowed for each repair will be determined by the manufacturer's standard time schedule. Manufacturer's time schedule shall be furnished to the receiving district with the unit at the time of delivery (if available). If a manufacturer's time schedule is not available, the actual time for repairs, as noted above, will be used.

5. Warranty Repair Claims: Warranty repairs will be accumulated on STATE repair orders and will be billed from same, unless the vendor prefers to have claims processed on their standard forms.

6. Parts: Replaced parts will be held 30 calendar days and will be available for inspection by the Supplier or authorized representative. Copies of invoices for all parts will be provided to the Supplier. The cost of parts other than those furnished to STATE at no cost by the Supplier will be billed at actual cost.

7. Billing and Payment for Warranty Repair Expenses: Costs for minor warranty repairs will be accumulated, including labor and replacement parts (if not provided). Reimbursement payment must be made within 30 calendar days of the billing date.

8. MAJOR WARRANTY REPAIRS: When major warranty repairs are required, State of Utah will notify a representative of the vendor's Utah dealer by telephone at the location and the telephone number designated by the vendor on the data sheet as the point of contact. Major warranty repair work for the purpose of this specification means major repairs to frame assembly and major repairs to any other component(s) of the unit. Diagnosis of the actual repairs required will be the responsibility of the vendor. The vendor or his authorized representative may perform the repair work.

9. Response Time: Warranty repair action shall begin within two working days after notification is made to the vendor for need of warranty repairs. A representative of the vendor's Utah dealer will be notified by telephone at the location and telephone number designated by the vendor on the data sheet as the point of contact. The vendor shall notify State of Utah immediately of any changes in this location and/or telephone number. The warranty repairs should be completed and the unit returned (or picked up by State of Utah at the vendor's expense as outlined above) to State of Utah within a reasonable period of time. For the purpose of this specification eight working days is defined as a reasonable period of time. Excessive delays incurred for the performance of warranty repairs by the vendor may adversely affect the vendor's status as a qualified bidder.

10. PARTS AND SERVICE: The manufacturer of the equipment furnished shall have an authorized dealer within the state of Utah. The authorized dealer shall have factory-trained personnel available for warranty repairs and the performance of service. The dealer shall also maintain an inventory of high-usage parts and a quick source for low-usage parts.

PART VI: DATA SHEET

Example of DETAILED SPECIFICATION DATA SHEET TO BE INCLUDED

Bidders shall submit requested information below or attach a copy of your own data sheet. **Failure to provide and comply with submitted specifications will result in bid being declared non-responsive**.

	Minimum's	Comments
Manufacture of Unit	USA	
Dealer for Unit		
Make of Unit – Bid		
Model of Unit – Bid		
1.1-Unit to be New	< Hours	
1.2 – Unit Specification Included	Spec Included	
1.3 – Completely Assembled	Operational	
1.4- Environmental Considerations	2003 Standard	
1.5- ISO standards		
2.1- One man operation / Cab	One Man	
2.2- Operated in altitudes	10,000'	
2.3- Road Speed	35 mph	
2.4- GVW	31,000 lbs	
2.5- Fasteners	Grade 8	
2.6- Tube, line, electrical	Protected	
3.1- Chassis Safety	Handle/Step/etc	
3.1.2- Axle exceed GVW rating	Complies	
3.2- Frame	70,000 psi	
3.2.1- Frame intégral	Complies	
3.2.2- Stiffeners	Treated	
3.2.3- Pintle hook	Model included	
3.3- Ground Clearance	8"	
3.4- Height	13'	
3.5- Width	102"	
3.6- Engine	Make / Model	Gallon per hour of fuel usage estimate _____
3.6.1-H.P.	500	
3.6.2- Liters	12 Liter	
3.6.3-Injector	Electronic	
3.6.4- Filters	Spin-On	
3.6.5- Restriction gauge	Resetable	
3.6.6-Diagnostic	On - Board	
3.6.7- Start	-10^0	
3.6.8- Housing	Enclosed	
3.6.9- Protection	Will shut down	
3.6.10- Emission Standards	Current	
3.7- Cooling	-40 / Secure/	
3.7.1- Radiator	Accessible	
3.7.2- Clamps	Torque-Stainless	
3.8- Air Filter	2 stage	
3.8.1 Restriction indicator	Dash mounted	
3.9 Capacity – 8 hrs op.	Gallons	
3.9.1 Equalized fuel		
3.9- Trans	Hydrostatic	
3.10- Drive Traine	2 axle 4X4	

3.11- Drive \	Model	
3.11.1 Automatic drive		
3.11.2 Load sense		
3.11.3 Engine actuated		
3.11.4 Variable Hyd.		
3.11.5 35 MPH		
3.12- Hydraulic pump	Model	
3.13- Drive motor	Model	
3.14- Transfer Case	Certify Model	
3.15- Axles	25,000 lbs	
3.16- Shaft	Greasable	
3.17- Brakes	Meet Spec	
3.17.1 FMVSS	Standard's	
3.18- Steering	Sensitive	
3.18.1- power assist	Complies	
3.18.2- directional control	Operation	
3.18.3- protection	Components	
3.18.4- All-Wheel Steering	Crab Coordinate	
3.18.5- Indicator wheel position	Complies	
3.18.6- Lockouts	Complies	
3.18.7- locking system	Complies	
3.19- Suspension	Meets	
3.20- Wheels/Tires	Size	
3.20.1-Tire design	Available	
3.20.2-Budd rims		
3.20.3- Spare Tire	Complies	
3.21- Hydraulic	Exceed	
3.21.1- Hyd reservoir- site gage	Complies	
3.21.2 Filter spin-on	Complies	
3.22- Electrical 12-volt	Complies	
3.22.1- Circuit panel	Accessible	
3.22.2- Batteries	Complies	
3.22.3- Batt-cut/off	Complies	
3.22.4- Alternator	Complies	
3.22.5- Inverter	Complies	
3.22.6- Alarm	Complies	
3.22.7- Solenoid	Exceed	
3.23- Lighting – FMVSS	Complies	
3.23.1 Front Lights		
3.23.2 Rear Lights		
3.23.3 Light Bar		
3.23.4 Stop/Turn LED		
3.24- Wiring	Complies	
3.25- Cab fully enclosed	Complies	
3.25.1-Insulated		
3.25.2-Weather sealed		
3.25.3-Sound suppression		
3.25.4-Roof/doors		
3.25.6-Doors		
3.25.7-Visor		

3.25.8-Glass		
3.25.8.1-Windsheild/heated		
3.25.9-Windows		
3.25.10-Wiper		
3.25.11-dome light		
3.25.12-Mat		
3.25.13- Driver Seat		
3.25.14- Pass. Seat		
3.25.15- Seat Belts		
3.25.16- Mirrors		
3.25.17- Steering Wheel / tilt		
3.25.18- Horn		
3.25.19- Gauges		
3.25.19.1-Gauges/ included		
3.25.19.2- gauges lighted		
3.26- Heater Defroster	Complies	
3.26.1- Cab heat		
3.27- Rotary blower	Complies	
3.28- Blower head – hydraulically	Tilt's	
3.28.1- Cast Snow – standing	Capable	
3.28.2- Capacity	4,000 TPH	
3.28.3- Wide	101"	
3.28.4- Raise	18"	
3.28.5- Down pressure	2"	
3.28.6- Float capability	yes	
3.28.7- Mechanical Lock	Pined	
3.28.8- Belt Not acceptable	Complies	
3.29- Helical Reel		
3.29.1- Center Drive	Center Driven	
3.29.2- Helical Cutter	Replaceable	
3.29.3- Ribbons	Serrated	
3.29.4- Safety Rings	Outboard side	
3.29.5- Reel diameter / width	49" / 101"	
3.29.6-Auger protected	Shear pins	
3.30- Reel housing	Steel	
3.31- Impeller Full- Speed/Load	Capable	
3.31.1- Replaceable	5-Bolt-Ons	
3.31.2- Protected	Shear pin	
3.31.3- Steel	10-Gauge	
3.31.4- Rotates	85^0 R /45^0 L/flat	
3.32- Reel / Impeller	4 Speed	
3.32.1- Reverse	Complies	
3.32.2- Impeller sheer pin		
3.33- Scraper Blades	Replaceable	
3.34-Cast Assembly	Precision	
3.34.1- Chute rotate	Complies	
3.34.2- Casting control		
3.35- Painting	Powered Coating	

4.1 Delivery – Est. Date

5. Warranty	1 year	
Engine	5 year	
5.1.1- Labor Responsible		
5.1.2- Minor Repairs		
5.1.3- Labor Rate		
5.1.4- Claims		
5.1.5- Parts		
5.1.6- Billing		
5.1.7- Major Repair		
5.1.8-Reponse Time		
5.1.9- Part & Services		